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August 21, 2001

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FEDERAL COMMUNICATIONS COMMISSION
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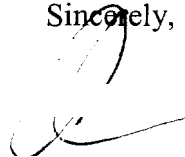
Magalie Roman Salas, Office of the Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-B204
Washington, DC 20544

**Re: In the Matter of Developing a Unified Intercarrier Compensation Regime
Docket No. 01-92**

Dear Ms. Salas:

Enclosed please find an original and four (4) copies of the Comments in Docket No. 01-92 on behalf of Global NAPs, Inc.

Sincerely,



Christopher W. Savage

Noted by [unclear] rec'd
DATE

014

Before the
Federal Communications Commission
Washington, D.C. 20554

ORIGINAL

In the Matter of

Developing a Unified Intercarrier Compensation
Regime

CC Docket No. 01-92

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

COMMENTS OF GLOBAL NAPS, INC.

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August 21, 2001

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SUMMARY

Global NAPs strongly supports the Commission's decision to undertake a thorough reexamination of its policies regarding intercarrier compensation. Establishing a unified intercarrier compensation regime — applicable to all types of traffic — is a sound and worthy goal. A regime that permits “arbitrage” of physically identical traffic among multiple, disparate compensation rules — that is, a regime like the one we have now — distorts investment decisions; creates controversy among carriers, customers, and regulators; and, in the end, interferes with competition and with maximizing consumer welfare. A new regime that eliminates arbitrage would be a watershed event in telecom regulation. One that does not, though, would just be more of the same old stuff,

Global NAPs also supports giving serious consideration to the work of Messrs. Atkinson, Barnekov, and DeGraba.¹ The dominant regulatory assumption for decades has been that (a) one may unambiguously assign “responsibility” for the costs of a telephone call to the party making the call, and (b) it makes sense, in light of that “responsibility,” for the calling party (or, in the context of this rulemaking, the calling network) to pay. Although the two papers approach the matter somewhat differently — and although Global NAPs has serious reservations about the analysis and conclusions in both papers — both injure, if not actually by slaying, the sacred cow of “cost causation” as a principle of intercarrier payment arrangements.

¹ See J. Atkinson & C. Barnekov, “A Competitively Neutral Approach to Network Interconnection,” OPP Working Paper No. 34 (Federal Communications Commission, December 2000) (hereinafter “Atkinson & Barnekov”); P. DeGraba, “Bill and Keep at the Central Office as The Efficient Interconnection Regime,” OPP Working Paper No. 33 (Federal Communications Commission, December 2000) (hereinafter “DeGraba”).

What is curious in retrospect is that “cost causation” caught on as much as it did, at least in the realm of intercarrier payments. When two networks interconnect, they are able to send traffic to each other and therefore to impose costs on each other. What makes the imposition of these costs possible is fact that the two networks are interconnected. It is that inherently “joint” situation that is the source of the cost issue. That inherent “jointness,” however, means that in terms of overall economic efficiency — *i.e.*, in terms of the total amount of investment to be made in telecommunications equipment and the total amount of services produced — it actually doesn’t matter whether the network sending traffic pays for it, or if, instead, the receiving network has to bear the costs that result from having to handle it. This is the unambiguous result of the well-known Coase Theorem, which applies to situations where two actors each engage in activities that impinge on one another.*

So, as a policy matter, and as far as economic efficiency is concerned, the Commission could require bill-and-keep for all traffic, or require calling-network-pays for all traffic, without concern that either choice would be “wrong.” There are some second-level considerations, of course. Bill-and-keep saves on billing costs. Calling-network-pays provides a better opportunity for new entrants to manage their cash flow. But at the highest level — that of overall economic efficiency — it doesn’t matter. Really.

This is both liberating and sobering. It is liberating because what may have seemed to be a difficult policy dichotomy is actually not difficult at all. Bill-and-keep is fine, and so is calling-network-pays. It is sobering, however, because for the Coase Theorem to actually apply — and for actual economic efficiency to be served — the chosen regime must be consistent,

² See R. Coase, *The Problem of Social Cost*, 3 J. L. & Econ. 1 (1960). Professor Coase won the Nobel Prize in Economics for his discovery of this result. See Atkinson & Barnekov at 8 n.32.

simple, and fair. Otherwise, transaction costs — in this case, “arbitrage” opportunities, and the endless inter-carrier bickering they engender — will bury *either* regulatory foundation in a choking tangle of regulatory underbrush.

For this reason, Global NAPs is dismayed about two aspects of the *Notice*. First is the suggestion that access charges are not on the table. Second is the closely related notion that the matters under discussion are somehow limited to “local” interconnection and “local” traffic. These issues are fundamental because they embody the conflict between the monopoly-driven, subsidy-laden, arbitrage-inducing compensation regimes of the past and the technical and economic realities of 21st-Century telecommunications.

Basically, using modern technology, switching should cost, at most, a few tenths of a penny per minute, and efficient fiber-optic transmission makes per-mile transmission costs almost negligible. So, there little reason for the cost of a call to vary with distance. Indeed, most major long distance carriers offer “postalized” rates, with a per-minute charge unrelated to distance. **As** far as intercarrier compensation is concerned, there is no reason a carrier should have to pay more to hand off traffic it has carried two thousand miles before the hand-off, than it pays for traffic it has carried for two miles, or ten feet. That is, there is no economic basis to distinguish between terminating access traffic and terminating local traffic. And the notion that a carrier might have to pay for the privilege of *receiving* traffic from another carrier based on how far the receiving carrier will carry the traffic — that is, the notion that there should be originating access charges at all — makes no sense, economically. Yet all of this is built into the current regime that treats “toll” traffic and “local” differently.

If the Commission holds to these two aspects of the *Notice* — that is, if access charges are off the table, and any new regime is limited to “local” traffic or “local” carriers — the

overwhelmingly likely outcome is the substitution of one arbitrage-ridden, inefficient regime for another. If the Commission concludes that bill-and-keep is preferable, the only way to avoid enormous arbitrage would be to apply it not only to “local” traffic, but to *all* traffic — “local,” “toll,” “interstate,” and “intrastate.” Going only part-way will simply result in another turn of the regulatory litigation wheel, with endless arguments over topics that have become dreadfully familiar: Is the traffic “really” local or “really” toll? Is it “really” interstate or “really” intrastate? Is the entity receiving it “really” an end user or “really” another network? The details may differ from today’s versions, but at bottom, the new arguments will be the old ones — reincarnated as punishment for their crimes in the regulatory war over ISP-bound calling.

The Commission could reasonably conclude that an “all-traffic-bill-and-keep” regime is not a realistic option. In that case, the next best answer is not, and cannot be, to impose bill-and-keep on some traffic, while leaving other traffic subject to intercarrier payments. That *creates* arbitrage. Instead, the next-best answer would be to eliminate arbitrage by treating all traffic the same in a calling-network-pays regime, *i.e.*, by eliminating originating access charges and applying a single, unified rate for all traffic termination — toll calls, local calls, ISP-bound calls, and any other kinds of calls. It would probably be better economically for the rate to be set at the TELRIC call termination rate, but the current interstate access rate could be used as well. What matters most is that the rate for all traffic be the *same*, and that it be absolutely clear that the ILECs would not only receive it when they terminate traffic, but would have to pay it when they sent traffic to another carrier.

Anything less than a unified regime for all traffic would do nothing significant to improve overall efficiency in intercarrier compensation. To the contrary, it would simply be tweaking the current system.

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Developing a Unified Intercarrier Compensation
Regime

CC Docket No. 01-92

COMMENTS OF GLOBAL NAPS, INC.

INTRODUCTION

Global NAPs, Inc., respectfully submits its comments in this matter.¹ Global NAPs' key points are: (1) In light of the Coase Theorem, it does not matter to overall economic efficiency whether the Commission establishes a bill-and-keep regime or a calling-network-pays regime. (2) What matters is that the Commission remove opportunities for arbitrage by establishing a regime that eliminates artificial distinctions among technically equivalent traffic. The greater the differences between the treatment of otherwise equivalent traffic, the worse the arbitrage problem. (3) It would be practically and legally difficult to move to a bill-and-keep regime for all traffic, so the best course is to establish a unified calling-network-pays regime in which all traffic exchanged is charged at exactly the same rate.

These comments are organized as follows: Section 1 briefly reviews the Coase Theorem and explains why it applies to intercarrier payments. Section 2 explains that because the high-level policy choice is actually a wash in terms of achieving economic efficiency, the decision between bill-and-keep and calling-network-pays depends entirely on second-order considerations — overwhelmingly, which system could actually be implemented in a way to eliminate arbitrage

¹ In the Matter of Developing a Unified Intercarrier Compensation Regime, *Notice of Proposed Rulemaking*, CC Dkt. No. 01-92 (rel. April 27, 2001) (“Notice”).

opportunities. Section 3 shows that, given these second-order considerations, the best choice is to establish a unified calling-network-pays system, in which networks charge nothing to others for sending them traffic, and, to the maximum extent possible, charge identical rates for any incoming traffic from any source.

1. ECONOMIC EFFICIENCY IS EQUALLY SERVED BY BILL-AND-KEEP OR BY CALLING-NETWORK-PAYS.

It is a commonplace in tort law that a party is held responsible for damages it causes, *i.e.*, costs that its actions impose on another. If I negligently destroy your fence with my car, I have to pay for the fence. If you negligently allow your tree to fall on my house, you have to pay for the damage. It is intuitive and sensible that we should be responsible for the damages we cause.

It is easy to confuse this intuitive understanding of responsibility with the notion that imposing such a rule is economically efficient or adds to overall consumer welfare. This confusion was explained by Nobel-Prize-winning economist Ronald Coase more than forty years ago. Coase showed that when the activities of two entities are entwined, so that one's actions necessarily affect the other, it makes no difference to economic efficiency whether responsibility for costs is borne by the one "causing" the costs or whether, instead, the costs are allowed to rest where they lie.² As long as the parties are free to rearrange the "default" cost burdens by contract, either default rule is equally efficient.

Coase showed that this counter-intuitive finding — that it doesn't matter who bears the costs under the default rule — applies to a wide variety of situations: trains running through wheat fields and occasionally setting them on fire; cows grazing in a pasture and eating a neighbor's corn; a doctor seeking to examine patients in a room disturbed by a noisy factory; a hotel whose guests are disturbed by construction on an adjacent lot. In all these cases, even

² R. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960).

though one can identify which party is “causing” the costs, it doesn’t matter from an economic perspective whether that party has to pay, or whether the party on whom the costs are “imposed” has to endure them. This occurs, in broad terms, because as long as the default rule is clear and parties are free to contract around it if they wish, the parties’ normal profit incentives will lead them to permit the higher-value activity to continue, while the lower-value activity recedes. When two entities are in a situation where one’s actions inevitably impinge on the other, reasons other than economic efficiency must dictate which rule for cost “responsibility” should apply, because from an efficiency perspective it doesn’t make any difference.³

This economic insight is directly applicable to intercarrier compensation. When two networks are interconnected, each impinges on the other by sending the other traffic, *i.e.*, each imposes costs on the other. Intuitively, it would appear that the network sending the traffic is “causing” the called party (or the called network, on the end user’s behalf), to incur costs. Therefore, under a traditional legal “causation” analysis, the calling party (or the calling network, on the end user’s behalf) ought to be held “responsible” for the costs it imposes. Indeed, the idea of “cost causation” is deeply embedded in the Commission’s ratemaking and other policies.⁴ But

³ For example, suppose allowing cows to graze in a pasture is much more valuable than growing wheat in a nearby field. If the rancher has to pay for any wheat the cows eat, he will do so, because the profits from the cows exceed the cost of the eaten wheat. If the rancher does not have to pay, the farmer will have less wheat at the end of the season. From the perspective of the overall economy, however, either result just reflects a shift in relative resources from wheat to cows — which we know, in this example, to be the more valuable use. On the other hand, if wheat is more valuable, and the rancher has to pay, then the rancher will graze fewer cows and destroy less wheat. If wheat is more valuable and the rancher does not have to pay, then the farmer will find it profitable to pay the rancher to graze fewer cows. Under either rule, relative production shifts from cows to wheat — which, in *this* example, is the more valuable use. Overall economic efficiency is served the same way, whether wheat or cows are more valuable, and whether the rancher or the farmer has to pay.

⁴ See, *e.g.*, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *First Report and Order*, CC Docket No. 96-98, 11 FCC Rcd 15499 ¶¶ 691, 984, 1063 (“*Local Competition Order*”)(1996) (for references to cost causation as a ratemaking principle).

the Coase Theorem says that as a matter of economic efficiency, it doesn't matter which party is "responsible" for the costs of the call. In other words, a regime in which one network has to pay to send traffic to another will not lead to any greater economic efficiencies than a regime in which each network simply has to bear the costs of handling traffic that it may receive.⁵ Coase shows, effectively from the top down, that the type of "cost causation" analysis that emerges from our legal system (and our every-day moral intuitions) does not lead to improvements in economic efficiency, whether in intercarrier compensation or in other "joint" situations.

Unlike Coase's top-down approach, the two OPP papers referenced in the *Notice* approach this question from the bottom up, so to speak, pointing out that the called party also typically benefits from receiving a call, so there is no *apriori* reason to think that the receiving network — acting essentially as the called party's agent — doesn't benefit from receiving traffic as well.⁶ By pointing out that the called party "benefits" from receiving calls, the papers appeal to our intuitive notions of fairness to suggest that receiving parties — and, therefore, receiving networks — could reasonably bear some of the costs of incoming calls.

To the extent that this logic is intended to deconstruct the standard view that says that an originating network is "responsible for" and therefore "should" pay for the traffic it sends, the papers make a real contribution to the debate. To the extent, however, that their purpose is to show that the "right" answer is that all or some particular portion of costs "should be" borne by

⁵ Therefore — in response to the Commission's request for comments in ¶ 30 of the *Notice* — it simply does not matter, for purposes of encouraging economic efficiency, which intercarrier compensation regime the Commission ultimately adopts. *See also Notice* at ¶ 2 ("we seek an approach to intercarrier compensation that will encourage efficient use of, and investment in, telecommunications networks"). As noted below, however, it matters a great deal that the Commission actually establish a regime that is consistent and clear. Otherwise, not only will there be no significant efficiency gains from a new regime (as compared to where we are today), there will likely be efficiency *losses* as carriers invest time, money and energy in rearranging their activities to take advantage of whatever *new* arbitrage opportunities the new regime might create.

⁶ *See Notice* at ¶ 23.

the receiving network instead of the originating network, Coase proves that such a purpose is misguided. On the level of overall economic efficiency, there is no “right” answer. Either system can work. What matters is that the system be simple, clear, and not subject to regulatory gamesmanship.⁷

That goal — avoiding arbitrage opportunities — must be the focus of the Commission’s efforts in this rulemaking. Any system that creates incentives for carriers to play games with each other about whether traffic is subject to this or that compensation rule will be a mess.⁸ By the same token, a system that eliminates such incentives — and forces carriers to focus on matters such as marketing their services and operating efficiently — will be a real improvement over where things are now.

The Coase Theorem also applies, albeit perhaps less directly, to two related questions in the *Notice*: transport costs, and whether there is any need to establish or alter rules regarding where carriers must interconnect physically with each other.’ The key to understanding these

⁷ See *Notice* at ¶ 44 (requesting comments on the rationales contained in the DeGraba and Atkinson-Barnekov working papers). The point is not that the papers do not provide a valuable and interesting perspective. They do, especially to the extent that they shake us loose from a slavish insistence on “cost causation” as a relevant rule for establishing an intercarrier compensation regime. Once that form of perceptual tunnel vision has been transcended, it is easier to see why the Coase Theorem applies here. That said, both papers remain within the paradigm that, to advance economic efficiency, costs “should” be borne by someone, either by the calling party (who “causes” them) or the called party (who “benefits” from them). The key (and, admittedly, counter-intuitive) result of the Coase Theorem is that all of this analysis in terms of “should” is irrelevant to an economically efficient result. See also *Notice* at ¶¶ 20-23.

⁸ The Commission seeks “an approach to intercarrier compensation that will encourage efficient use of, and investment in, telecommunications networks, and the efficient development of competition.” *Id.* at ¶ 2. In a nutshell, the Coase Theorem shows that a consistently-implemented system of either bill-and-keep or calling-network-pays “will encourage the efficient use of, and investment in, telecommunications networks.” On the other hand, *any* regime in which there is a smorgasbord of different rates applicable to technically identical traffic based on abstract regulatory classifications will severely *impede* “the efficient development of competition.” See generally *Notice* at ¶¶ 33, 35.

⁹ See, e.g., *Notice* at ¶¶ 46-50, 70-72, 112-14. The two issues are related because allowing an originating network to choose where it will deliver traffic to a terminating network (e.g., a CLEC’s right
(note continued)...

issues is to recognize that transport is very, very cheap.” It therefore should not matter very much where Carrier A hands off traffic bound for a customer of Carrier B. So, in general, if it is technically feasible to do so, the originating carrier should be able to deliver its traffic anywhere on the network of the terminating carrier. If the default rule is bill-and-keep, this will encourage networks to deploy efficient transport networks. But suppose the default rule is calling-network-pays, with (cheap) cost-based transport rates. Here the originating carrier will be able to make rational economic decisions about whether to carry the traffic close to its destination, at its own expense (paying less transport to the terminating carrier), or instead simply handing it off to the terminating carrier and paying for the transport.

Theory aside, the real world fight over where to interconnect actually does not involve intercarrier compensation so much as efforts to restrain ILEC monopoly abuses. The fact that it is actually cheap for an ILEC to carry traffic from one point on its fiber network to a (possibly) distant end user does not mean that it would be cheap in the short run for a CLEC (with much less traffic to carry) to construct facilities for, or pay retail tariff rates for, such transport. This means that ILECs will naturally want to impose costs on their rivals by either forcing them to construct redundant transport facilities or to pay inflated tariffed rates. Fortunately, Section 251(c)(2) of the Act permits CLECs to interconnect at any technically feasible point and to pay

...(note continued)

under Section 251(c)(2) to interconnect at “any technically feasible point”) necessarily involves allowing the originating network to impose transport costs on the terminating network. Only if traffic is delivered to the end office serving the called party will “transport costs” as such be avoided (assuming, for this purpose, that loop costs are not part of “transport”).

¹⁰ Information from state proceedings involving ILEC TELRIC interoffice transport costs indicate that the proper measure is most likely “hundred-thousandths of a penny per mile per minute.” In other words, a thousand miles of transport should cost a few ***hundredths of a penny*** per minute. With costs this low, it is hard to view this issue as a critical problem. In fact, in Global NAPs’ experience, its significance lies in the ability of ILECs to use it to impose costs on CLECs. See *infra*.

cost-based transport rates to get traffic from that point to its destination. Strict enforcement of that ILEC obligation would cause this issue to disappear.¹¹

2. THE KEY TO AN EFFICIENT INTERCARRIER COMPENSATION REGIME IS ELIMINATING ARBITRAGE OPPORTUNITIES.

The Coase Theorem shows that the choice between bill-and-keep and calling-network-pays cannot be made on the basis of which approach will achieve the most economic efficient result. In theory, either system can work. What matters is not theory, but practice. If the Commission perpetuates or simply tweaks the current hodge-podge of payment schemes, the result will be arbitrage. The key problem is that today, payment obligations depend not on what a minute of traffic does to the receiving carrier's network, but on the basis of metaphysical traffic classifications having nothing to do with economics or engineering.

Note that there is nothing wrong with "arbitrage" as such. In this context — while the term is certainly bandied about in a pejorative way — all it really means is that, if significant economic consequences flow from which metaphysical box otherwise identical traffic falls into — "local," "toll," "access," "information access," "interstate," and/or "intrastate" — then economically rational carriers will devote resources to trying to ensure that traffic that they send or receive fits into the most profitable metaphysical box.¹² In other words, they will devote their

¹¹ In other words, Global NAPs believes that the current rules, as described in the *Notice* at ¶¶ 70-72 should remain in place. CLECs should be permitted to establish a single LATA-wide POI to which ILECs must bring CLEC-bound traffic, and CLECs should be permitted to interconnect at any technically feasible point on an ILEC's network — including the ILEC end of the link to the CLEC's own POI. That said, the primary justification for this rule is to make it easier for CLECs to compete with the ILECs' ubiquitous, embedded monopolies. If the Commission is interested in establishing a single rule that could apply across the board — and assuming that the present statute would permit such a rule that did not distinguish between ILECs and CLECs — the solution would not be to *require* CLECs to establish any particular number of POIs or to deliver traffic to any particular location on the ILECs' networks, but, rather, to allow any carrier to deliver traffic to any other carrier at any technically feasible point on the terminating carrier's network.

See Notice at ¶ 11 & n.18 (defining arbitrage as "profit-seeking behavior that can arise when a regulated firm is required to set different prices for products or services with a similar cost structure").

(note continued)...

resources to regulatory specialists and lobbyists, as opposed to network investment and customer service.¹³

This is simply the profit motive at work. If a CLEC can receive money (reciprocal compensation) if incoming traffic is classified as “local” but actually has to pay originating access if it is classified as “toll,” it will do what it can to ensure that the traffic it receives is “local.” If an ILEC has to pay money if the traffic it sends to a CLEC is “local” (reciprocal compensation) but receives access charges (or at least doesn’t have to pay) if that traffic is classified as “toll,” it will do what it can to ensure that the traffic it sends is “toll.” This, in a nutshell, is the (now) four-year-old debate over what to do about ISP-bound calls.¹⁴

...(note continued)

See also id. 712 (defining arbitrage as “any discrepancy in regulatory treatment between similar types of traffic or similar categories of parties”). The latter definition is superior. The fundamental problem is not that regulated firms are **required** to set different prices for similar (or, effectively here, identical) activities, as suggested by the first definition. The fundamental problem is that firms have the **opportunity** to do **so** by virtue of the existence of multiple regulatory classifications. The difference is significant. The formulation in the *Notice* suggests that arbitrage is a problem created by bad regulations that force carriers to set different prices. But if firms’ profits will vary depending on regulatory classification of traffic, the profit motive alone will ensure that arbitrage will occur if regulations are sufficiently flexible to **permit** carriers to charge different prices for the same functions based on metaphysical, legalistic classifications. Consequently, the Commission must take affirmative steps to prevent arbitrage, because normal, profit-motivated businesses will engage in it if they can.

¹³ As stated in the *Notice* at ¶ 12: “[P]arties will revise or rearrange their transactions to exploit a more advantageous regulatory treatment, even though such actions, in the absence of regulation, would be viewed as costly or inefficient.” Paragraph 33 of the *Notice* requested comments on “whether a particular intercarrier compensation regime is technologically and competitively neutral’ ... ‘in the context of whether [such] [sic] pricing regime encourages the efficient investment in, deployment of network infrastructure, including investment in broadband infrastructure.” Any regime in which a physically identical traffic exchange results in different economic consequences based on metaphysical categorizations — such as the present regime — will fail this test. Keeping the distinction (in terms of payment obligations) between “access” or “toll” traffic on the one hand, and “local” and/or “information access” traffic on the other, will also fail this test.

¹⁴ In other words, the Coase Theorem provides the answer to the question in ¶ 4 of the *Notice* regarding the establishment of “a bill-and-keep rule to govern LEC recovery of costs associated with the delivery of ISP bound traffic after the three-year interim period.” The answer is that it does not matter what regime the Commission adopts, as long as carriers are no longer allowed to impose different labels on otherwise identical calls or to impose different charges based on such labels. Eradicating labels on
(note continued)...

It would be naïve in the extreme to think that this operation of the profit motive on ILECs and CLECs will stop if the Commission were to decree that some subset of traffic that is now subject to either reciprocal compensation or access were to be reclassified as subject to bill-and-keep. ILECs will still want to classify traffic they send or receive as access so that they can get paid. CLECs (under the partial-bill-and-keep regime) will want to classify traffic that they send as local (no payment) and traffic they receive as either local (no payment) or terminating access (so they can charge the ILEC).

Perhaps different “types” of traffic could logically be subject to different payment regimes if there were some reasonable economic or engineering basis to distinguish the traffic. But it seems quite clear that no such basis exists. A minute of traffic from an end user switched to some outbound switch port imposes the same costs on the carrier doing the switching, as does a minute of traffic coming in from another carrier. And it certainly can have no impact whatsoever on the switching carrier’s costs whether inbound traffic traveled a long way or a short way before being handed off. Equally irrelevant to an originating carrier is whether outbound traffic will travel a few feet or a few thousand miles once the hand-off has occurred.

As a result, any classification of traffic into “toll” or “local,” or “access” or “reciprocal compensation,” is doomed to create arbitrage. Arbitrage opportunities exist today, and will continue to exist if the Commission imposes bill-and-keep on some subset of traffic, or if it establishes a regime in which all traffic is subject to some payment, but at different levels

...(note continued)

otherwise identical calls solves the disparity created by the current **ISP** compensation regime. As a result, if that course is taken, the concerns raised in ¶¶ 52, 64, and 66-67 of the *Notice* would be moot.

depending on regulatory classification.¹⁵ Moreover, it seems that the Commission clearly understands this point. As stated in the *Notice*:

We are particularly interested in identifying a unified approach to intercarrier compensation — one that would apply to interconnection arrangements between ***all types of carriers*** interconnecting with the local telephone network, and to ***all types of traffic*** passing over the local telephone network.

Notice at ¶ 2 (emphasis added). This statement suggests a regime in which the classification of traffic into “local,” “toll,” “access,” “reciprocal compensation,” etc., would have no economic significance, since all traffic would be treated the same.¹⁶

Indeed, the Commission should strongly resist the idea that progress can be made here by half-measures. The problem is treating technically equivalent “traffic” differently based on criteria that do not effect costs or engineering. There is no engineering or economic difference between a minute of local traffic, a minute of toll traffic, a minute of ISP-bound traffic, a minute of interstate traffic, and a minute of intrastate traffic. The only way to solve the problem of arbitrage — and the waste of resources it creates as carriers bicker endlessly about regulatory abstractions — is to move to a regime that treats all traffic the same.”

¹⁵ The Commission seeks comment on whether problems would arise from failing to include, within a unified regime, traffic the Commission does not now regulate, such as Internet backbone traffic. See *Notice* at ¶ 2. Global NAPs submits that there is a natural division between traffic literally ***on*** the public switched telephone network, and other traffic (such as on private line networks or the Internet). Any traffic that originates with, or is bound for, an end user with a PSTN telephone number will, sooner or later, connect to a PSTN switch. Traffic that never hits a PSTN switch can safely be regarded as outside the purview of the unified regime to be established here. Traffic that connects to a PSTN switch, however, should be treated the same, no matter where it comes from and no matter where it is going.

¹⁶ As discussed in these comments, the distinction between “local” and “toll” traffic is, with current and future technology, essentially arbitrary. That said, one could reasonably view a “local” network as one that provides end users with stations on the PSTN, *i.e.*, which lines with telephone numbers. While typical ILECs and CLECs would be “local” networks for this purpose, so, too, would traditional long distance networks if they provide direct connections to some (presumably large) customers as end users.

¹⁷ The problem of half-measures is illustrated by a hypothetical proposal to convert the United States’ “drive-on-the-right” system to the “drive-on-the-left” system used in England. Assuming one (note continued)...

This is why the Commission must abandon the notion that there should be separate rules for “local” traffic and “access” traffic. There is no sensible economic or engineering basis to distinguish these two types of traffic. There are different rules today for local traffic and access traffic. The result has been squabbling over whether traffic that carriers exchange should be classified as local or access. The proposal to move towards lower rates, even to bill-and-keep, for local traffic, while leaving access charges to trend slowly downward as the CALLS plan is implemented, *see Notice* at ¶ 97, will actually make the problem *worse*, because it will increase the economic significance of the distinction between the two types of traffic.¹⁸

On the other hand, the Commission could do a great service to the industry by *eliminating* the economic significance of the different regulatory classifications. If all traffic a carrier received resulted in a payment of zero, then the carrier would be strongly motivated to make its call termination operations as efficient as possible and to find ways to charge its end users for the calls they receive. If all traffic a carrier received resulted in a payment of (say) \$0.002 per minute, then the carrier would be strongly motivated to make its call termination operations as efficient as possible, and — if it could get its costs below \$0.002 per minute, it would not even have to figure out how to charge its customers for the calls they receive. Either option would eliminate arbitrage opportunities.

...(note continued)

wanted to make such a change, it would not make sense to say that, *e.g.*, trucks and buses should start driving on the left first, in order to make the transition to the new system more smooth and gradual.

¹⁸ Note that in a regime in which all traffic is subject to the same payment terms, the entire issue of “virtual NXXs” becomes irrelevant. *See Notice* at ¶ 115. The issue only exists today because carriers often use NPA-NXX information to determine whether calls are “local” or “toll” purposes of billing end users. If the economic consequences on the affected carriers of exchanging a “toll” or “local” call were identical, neither the actual locations of the called and calling parties, nor the locations associated with the “V&H” coordinates assigned to particular NPA-NXXs, would be significant.

However, if *some* traffic has to be handled on a bill-and-keep basis, and *other* traffic results in payment; or if *some* traffic results in a small payment and *other* traffic results in a large payment, then both the originating and terminating carriers will be motivated — at cross-purposes — to engage in arbitrage. The receiving carrier will want to classify incoming traffic as subject to the higher payment, and the originating carrier will want to classify that same traffic as subject to no payment, or the lower payment. The Commission is no more able to avoid this result of the laws of economics by regulatory fiat than it is able to require that photons in fiber optic cables travel faster than the laws of physics allow.”

This is the “arbitrage” problem in a nutshell. The same physical task — taking traffic in on one port of a switch and shipping it out on another — is subject to very different financial arrangements based on factors that have no cost or technological significance. As long as this situation exists, intercarrier compensation will be “broken,” as it is today. On the other hand, were this irrational system to be replaced by a simple and rational one, an enormous amount of ultimately pointless intercarrier wrangling could be dispensed with, and carriers would be forced to make their way in the market on the basis of their respective service offerings.

In this regard, the Commission should carefully consider both the historical basis for establishing high access charges — that is, access charges above an economically reasonable level, such as TELRIC — as well as the statutory basis for dividing traffic into mutually

¹⁹ The Commission suggests that some current arbitrage issues may exist because of “inefficient reciprocal compensation rates,” *i.e.*, rates that are too high by some standard. See *Notice* at ¶ 11. Properly speaking, arbitrage opportunities arise not because any particular rate for handling a minute of incoming traffic is too high or too low, but rather because different rates exist at all. Any time any carrier service is priced above cost, that will create an incentive on the carrier to encourage people to use that service and, where possible, encourage the carrier to use regulatory and legal means to classify existing usage in that category. This is why, for example, it is common in interconnection agreements for ILECs to insist that any traffic that cannot be identified be treated as “access” traffic. ILECs do this because access is reliably overpriced, so the ILEC cannot be harmed by treating any traffic as access.

exclusive “toll” and “local” categories. Upon examination it is clear that (a) the historical reasons for keeping access charges high are no longer valid, and (b) the distinction between “toll” and “local” is an artifact of long-superseded, decades-old technology and marketing arrangements, that should play no role in sound carrier-to-carrier compensation going forward.

The Communications Act defines “telephone exchange service” as either (a) “intercommunicating” service within a single exchange or group of exchanges, “covered by the exchange service charge,” or (b) any “comparable service” by which a customer may originate or terminate telecommunications. 47 U.S.C. § 153(47). “Telephone toll service” is the same thing, except that it involves “stations” — *i.e.*, telephone lines — in different exchanges and “for which there is made a separate charge not included in contracts with subscribers for exchange service.” 47 U.S.C. § 153(48). As a matter of federal law, then, if the carrier makes a separate charge for connecting to some “stations” and not others, the service of reaching those “stations” (again, telephone lines) is “toll.” Otherwise it is local.²⁰

What is most significant about these definitions for purposes of the present rulemaking is that the distinction between “toll” and “local” has nothing to do with distance, cost, or technology. It is entirely dependent on purely retail, marketing considerations: is the end user hit with a separate charge or not? But if there is no distance-based, cost-based, or technology-based distinction between local and toll calls, then there is no sound policy reason to treat them differently in the realm of intercarrier compensation. They are all just “traffic” to the switches that direct them to different destinations and the fiber-optic transport facilities that carry them there.

²⁰ Note that these definitions do not depend at all on how close or far apart the “stations” being connected happen to be. And note that they do not depend at all on whether the “stations” are in the same state or not. All that matters is whether the carrier (presumably, but not necessarily, the originating carrier) imposes a charge “not included in contracts with subscribers for exchange service.”

It is quite true that in the early 1980s when access charges were being invented, it ~~was~~ widely believed — and may even have been true — that “long distance” service provided a “subsidy” to keep local service rates low — below cost, even — in order to promote universal service. At that time, the local exchange business was still viewed as a monopoly even as policy-makers were promoting and encouraging competition in long distance. In that context, attempting to undo many decades of implicit long-distance-to-local subsidies was more of a burden than regulators could bear. So access charges were established with enormous subsidies to local service — or at least local carriers — built in.²¹

This type of implicit subsidy has now been outlawed by Section **254** of the Act. If subsidies are needed for universal service, they must be explicit and competitively neutral. Whatever universal service funding mechanism might exist today or in the future, the access charges themselves should be set no higher than some reasonable approximation of economic (*i.e.*, long-term incremental) cost. And under Section 252(d)(2), intercarrier compensation for Section 251(b)(5) traffic (whether viewed as “local” traffic, “all traffic that isn’t access,” or “all traffic that isn’t carved out by Section 251(g)”) should be the same. In neither case does the traditional “subsidize local service” rationale survive the passage of the 1996 Act.

3. THE COMMISSION SHOULD ESTABLISH A UNIFIED COMPENSATION SYSTEM FOR ALL INTERCARRIER TRAFFIC — INTERSTATE AND INTRASTATE, TOLL, LOCAL, OR ACCESS.²²

Section 1 explained that the Coase Theorem shows that there is no sound high-level policy basis to prefer bill-and-keep to calling-network-pays, or vice versa. In theory, either one will be economically efficient, as long as either one is implemented in a simple and consistent

²¹ See Notice at ¶¶ 19-20.

²² This section responds to the request for comments on the advantages of adopting a unified regime. See generally, Notice at ¶¶ 36, 128-29.

manner. Section 2 emphasized that the real villain in intercarrier compensation is opportunities for arbitrage, here defined as opportunities for economic benefit derived from classifying traffic into one or another category unrelated to the costs of handling it. This section explains in more detail why the option most likely to be practical is to establish a unified “calling-network-pays” plan applicable to all traffic, no matter how classified.²³

The Commission has strongly indicated that it does not plan to alter access charges in this proceeding.²⁴ Instead, its preference seems to be to allow the CALLS plan to work itself out as previously ordered.²⁵ On the other hand, the Commission has indicated that it would like to move “local” intercarrier compensation — *i.e.*, intercarrier compensation for Section 251(b)(5) traffic (and for ISP-bound traffic, if it is different) — to bill-and-keep. This would be a terrible result in terms of arbitrage and wasted carrier effort.²⁶

²³ See Notice at ¶ 4 (suggesting that bill-and-keep for everything, including access, might be preferable). Aside from the fact that getting to bill-and-keep for everything would be administratively challenging (*e.g.*, the ILECs would have to gear up to arrange to charge their end users for incoming and outgoing usage now recovered via access charges), this would still leave the anomaly of end users paying for usage, while interconnected networks do not. This would encourage end users to become, or to masquerade as, networks. See note 36, *infra*.

²⁴ Notice at ¶ 97.

²⁵ *Id.*

²⁶ See Notice at ¶ 69 (regarding incentives to carriers under a bill-and-keep approach for 251(b) traffic, and whether such approach negates the effects of market power). Under a bill-and-keep regime, a carrier will be motivated to find customers who make a lot of calls, for which they can be charged, that can be sent to other carriers for free. Under a calling-network-pays regime, a carrier will be motivated to find customers who receive a lot of calls, as long as the payment for the traffic is at a level that covers the cost of handling the incoming traffic. Either system gives all carriers the ability to either extract payments from, or impose costs on, carriers with which they are interconnected. This is just another way of saying that interconnected carriers are in a situation to which the Coase Theorem applies. See Section 1, *supra*. In this regard, however, Global NAPS must take issue with the notion that there is any “problem” involved in a network being “one way,” *i.e.*, serving customers that primarily or exclusively make or receive calls. See, *e.g.*, Notice at ¶ 52 & n.65. In a competitive environment different firms will fill different competitive niches. Some firms may choose to be broad-based communications providers to a variety of customers; others may specialize on telemarketers, ISPs, doctors, or some other customer class. It is certainly true that the economic appeal of different niches will be affected by relevant regulatory rules, but it is naïve to think that some Platonically ideal set of regulatory rules can eliminate market specialization. This is not a “problem.” It is the laws of economics at work.

Ironically, the Commission probably has more power under the statute (~~as~~ written today) to do the opposite — that is, move access charges to bill-and-keep and set rates for Section 251(b)(5) traffic at a reasonable level. The Commission’s authority over access charges is essentially plenary, deriving from its “through route” authority under Section 201(a) of the Act. The Commission would be legally free, for example, to require a carrier originating an interstate “toll” call to charge its end users some reasonable cost-based rate for the use of that carrier’s network to transport a call from an end user to a long distance carrier (or any other third network).²⁷ The Commission would be equally free to require a carrier terminating an interstate “toll” call — that is, picking it up from an IXC and delivering it to an end user — to recover its costs of doing so from the end user receiving the call. In this regime, the toll carrier would charge the customer for intercity carriage, but would not have to pay either the originating or terminating carrier anything at all — that is, this would be bill-and-keep for access.²⁸

On the other hand, as noted above, Section 252(d)(2) expressly requires that for Section 251(b)(5) traffic, a charge that is a reasonable approximation of the incremental cost of terminating traffic be established unless the carriers themselves agree to a bill-and-keep regime. **So**, it is hard to see how one could establish a mandatory bill-and-keep regime for Section 251(b)(5) traffic.²⁹

²¹ The Act defines “exchange access” as offering access to telephone exchange services or facilities for the purpose of the origination or termination of telephone toll service. *See* 47 U.S.C. § 153(16). Since the definition of “toll” is based entirely on arrangements with retail customers, *see supra*, it would appear that imposition of access charges is unwarranted in cases where the customer is not charged toll rates. Concern about whether “access” charges or some other charges properly apply, however, would be moot in a system in which all intercarrier compensation is the same irrespective of the classification of the traffic.

²⁸ Converting terminating access in particular to bill-and-keep, with any termination costs involved recovered from the end user receiving calls, would solve the problem of “terminating access monopolies” discussed in the *Notice*. *See id.* at ¶¶ 18, 53.

²⁹ *See Notice* at ¶¶ 75-77.

Be that ~~as~~ it may, as indicated above, the Commission should not be struggling to find ways to treat “toll” traffic (to which access charges apply) and Section 251(b)(5) traffic differently. It should be working to find ways to treat them the same. Here, there is harmony between the Commission’s apparent preference to continue with the orderly phase-in of the CALLS plan and the requirements of Section 252(d)(2), because both the CALLS plan and Section 252(d)(2) call for some terminating compensation to remain.³⁰ Under current law, therefore, the Commission should not try to move Section 251(b)(5) traffic to a bill-and-keep regime, but, instead, to harmonize the charges for “access” traffic under the CALLS plan and 251(b)(5) traffic exchanged between LECs.³¹

The Commission has the authority to impose this result for both Section 251(b)(5) traffic and interstate access (Section 201) traffic. It would need to simultaneously implement several changes.³² First, it would need to eliminate originating access charges, to avoid the anomaly of an interconnecting carrier having to pay for the privilege of receiving traffic. Just as most ILECs recover some of the fixed costs of loops through an interstate end user charge (the SLC), they could be empowered to recover the costs of getting traffic to the customer’s chosen long distance

³⁰ For the reasons discussed throughout these comments, it makes no sense to try to solve the problems of arbitrage by slowing phasing in changes in access charges on one schedule under the CALLS plan, while slowly phasing in changes in intercarrier compensation for Section 251(b)(5) traffic and (to the extent it is different) ISP-bound traffic on some other schedule. *See Notice* at ¶ 97. Such an approach would inevitably proliferate opportunities for arbitrage.

³¹ *See Notice* at ¶ 98 (seeking comment on how the existing CPNP interconnection regimes can be reformed in the event that the Commission decides not to adopt bill and keep). *See also id.* at ¶ 116 (regarding opportunities for arbitrage). Again, the only way to eliminate arbitrage opportunities — and the course the Commission should take — is to eliminate distinctions in the payment regimes applicable to otherwise identical traffic, irrespective of historical or statutory classifications and categories.

See Notice at ¶ 97 (seeking comment on “how best to proceed, in a coordinated manner with this phase in the development of a pro-competitive intercarrier compensation regime”).

carrier (originating switched access) from either a fixed or usage-sensitive charge to those same end users.³³

Second, the Commission would need to harmonize the presently diverse rates that a terminating carrier gets paid when it delivers a call to one of its end users. There is no sound economic or engineering reason why a call coming from Albuquerque, New Mexico should incur any different charge than a call coming from Alexandria, Virginia, when either one hits the local network in Washington, D.C.. In either case, it's just "traffic" to the terminating carrier. As a result, the Commission should either (a) lower interstate terminating access charges to the applicable TELRIC rate for Section 251(b)(5) traffic or (b) raise the Section 251(b)(5) rate to whatever rate the terminating LEC charges for access traffic. The point would be to ensure that the two rates are the same.

Third, the Commission would be well-advised to take steps to bring state-level access charges more into line with economic reality than they are today — ideally, to the identical rates as would be applicable (under the proposal above) to Section 201 and Section 251(b)(5) traffic. The Commission obviously does not have direct jurisdiction over intrastate access charges. It does, however, have the ability to strongly encourage carriers and state regulators to modify those charges to conform to the new unified intercarrier compensation regime. To use but one example, the Commission could condition the availability of interstate universal service

³³

Note that, to the extent that the functions whose costs LECs now recover through access charges are shifted to end user charges, some of the problems of rate integration would be mitigated or solved. *See Notice* at ¶ 14. Until a truly competitive local exchange market develops, in which end users have a choice of several LECs and switching between them is easy, it will probably be necessary for there to be some regulation of call termination rates. Using the ILEC's TELRIC or other appropriate cost-based rate as a benchmark is a reasonable way to address this problem. *See id.*

subsidies on a carrier establishing intrastate access charges equal to interstate levels or TELRIC rates, as the case may be.³⁴

These three steps, when implemented, would create an environment in which all intercarrier “traffic” is treated the same. It would, in other words, eliminate opportunities for arbitrage, and thereby put an end to the endless, fruitless bickering about how particular types of traffic should “properly” be classified.

Global NAPs emphasizes, however, that its arguments in favor of a calling-network-pays regime are, at bottom, pragmatic. The point is not that a calling-network-pays regime is somehow economically or theoretically “better” than bill-and-keep. The Coase Theorem shows that any such conclusion is wrong, as is the contrary conclusion that bill-and-keep is somehow “better” than calling-network-pays. Nor does Global NAPs deny that there would be real benefits to bill-and-keep: the expenses of tracking and billing intercarrier usage would be saved, and there would be no regulatory need to establish even the ILEC’s cost-based traffic termination rate.³⁵ Even so, in the real world as it has developed since the passage of the 1996 Act, establishing billing systems and estimating TELRIC rates has not been overwhelmingly difficult. But it seems legally challenging to establish a bill-and-keep regime for Section 251(b)(5) traffic, and the Commission has indicated that it is not inclined to modify the current access regime within the context of this rulemaking. It follows that to avoid arbitrage — the real issue that the

³⁴ The 10th Circuit recently held that the Commission is required by Section 254 to take steps that are reasonably calculated to cause states to establish explicit, competitively neutral state-level universal service systems. *See Qwest Corp. v. FCC*, 2001 U.S. App. LEXIS 17044, [*30]-[*31] (10th Cir. 2001). Such a system would wring the subsidies out of intra-state access charges. In this regard, simply fulfilling the 10th Circuit’s mandate regarding universal service would be a large step towards meeting the goals of this rulemaking as well. *See Notice* at ¶ 32 (noting statutory mandate to make universal service subsidies explicit).

³⁵ *See Notice* at ¶ 40-45, 51.

Commission is addressing here — the solution cannot be bill-and-keep for everything, but must, instead, be a unified calling-network-pays regime for everything.³⁶

4. CONCLUSION.

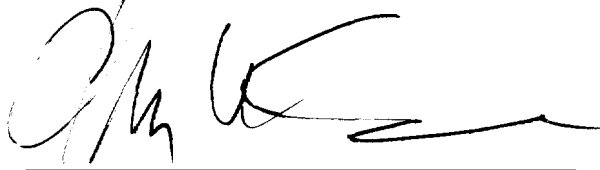
As a matter of economic efficiency, it does not matter whether intercarrier compensation is bill-and-keep or calling-network-pays. What matters is that all traffic be treated the same, because there is no sound cost-based or engineering basis to distinguish between traffic that falls into different regulatory categories such as “local,” “toll,” “ISP-bound” or “access.”

³⁶ As a final reason for preferring a calling-network-pays system to a bill-and-keep system, consider the concern raised in the *Notice* at ¶ 54, regarding entities basing their determinations as to whether to interconnect as a network or an end user on idiosyncrasies of the current system. Unless end users are to be able to send traffic to a network on a bill-and-keep basis — that is, unless somehow there will be a mandated system of flat-rated calling by end users — imposing a bill-and-keep system for intercarrier compensation arrangements will create an incentive for “end users” to represent themselves as “networks” in order to take advantage of the bill-and-keep regime for outbound traffic. On the other hand, a unified calling-network-pays system would allow end user charges to be harmonized with carrier charges for originating traffic to a network, so that this arbitrage opportunity, too, could be eliminated.

For both legal and practical reasons it is likely to be quite difficult to move to a bill-and-keep regime for all intercarrier traffic. As a result, the Commission should instead institute a system under which all intercarrier traffic is subject to the same "calling-network-pays" regime, including identical rates for all traffic delivered to another carrier.

Respectfully submitted,

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